WESTERN BOUNDARY WATER BULLETIN - 2001 - INTERNATIONAL BOUNDARY AND WATER COMMISSION

SEWAGE INFLUENT, NOGALES INTERNATIONAL TREATMENT PLANT

DESCRIPTION: One 61-centimeter Parshall flume with a water-stage recorder is located at the international boundary for measuring raw wastewater from Nogales, Sonora. The plant influent and effluent flows are measured by flow meters and recorded on individual chart recorders and continuous totalizers. The Nogales Wash Pumping Plant flows are contaminated surface waters from Mexico captured in the U.S. and pumped into the international sewer trunk line downstream of the influent recorder. Flows determined by pump hour clocks. The Nogales International Treatment Plant is located adjacent to I-19, approximately 14.5 kilometers north of the international boundary, all within the city of Nogales, Santa Cruz County, Arizona.

RECORDS: Flows from the United States are deduced from total plant influent less the flows measured crossing the international boundary from Mexico. Records available: Continuous monthly record for plant influent since August 1951; daily records for plant influent, January 1952 through 2001.

REMARKS: Nogales International Treatment Plant treats combined sewage from both Nogales, Arizona and Nogales Sonora by means of aerated stabilization lagoons. In February 1991, a plant expansion was completed which increased the capacity to 65.1 thousand cubic meters per day. Ultraviolet disinfected effluent is discharged directly into the Santa Cruz River. Prior to the expansion, the plant capacity was 31.0 thousand cubic meters per day and chlorinated effluent was discharged directly to the Santa Cruz River. Prior to December 18, 1971 the plant was located along the right bank of Nogales Wash, approximately 3.2 kilometers north of the international boundary.

Total Monthly Flows Thousand Cubic Meters				Daily Flows-Thousand Cubic Meters Per Day					
				Current Year 2001			Period 1952-2001		
U.S.	Mexico	Plant*	Total	Maximum	Minimum	Mean	Maximum	Minimum	Mean
587	1,469	0	2,056	78.9	57.8	66.3	93.0	2.5	25.1
490	1,373	0	1,863	73.9	62.6	66.5	80.4	2.5	25.7
763	1,292	0	2,055	72.6	61.9	66.3	85.7	2.8	25.6
701	1,264	0	1,965	87.9	58.1	65.5	87.9	2.6	24.2
539	1,419	0	1,958	69.2	56.9	63.2	69.2	2.1	22.8
480	1,292	0	1,772	64.9	55.5	59.1	64.9	2.6	21.3
606	1,238	0	1,844	65.1	54.3	59.5	68.1	2.6	22.2
501	1,177	0	1,678	56.4	51.9	54.1	75.6	2.8	23.8
324	1,271	0	1,595	55.8	51.0	53.1	67.9	3.0	25.1
437	1,214	0	1,651	83.3	49.1	53.2	87.2	2.6	25.4
242	1,219	0	1,461	52.1	45.1	48.7	84.7	3.0	25.1
 504 	1,199	0	1,703	63.5	 49.8 	54.9	75.9	1.3	 25.2
] 6,174	[][15,427	0	1 21,601	□ 87.9	□ 45.1] 59.2	□[93.0][1.3] 24.3
	U.S. 587 490 763 701 539 480 606 501 324 437 242 504	Thousand Cubrance Cub	Thousand Cubic Meters U.S. Mexico Plant* 587 1,469 0 490 1,373 0 763 1,292 0 701 1,264 0 539 1,419 0 480 1,292 0 606 1,238 0 501 1,177 0 324 1,271 0 437 1,214 0 242 1,219 0 504 1,199 0	Thousand Cubic Meters U.S. Mexico Plant* Total 587 1,469 0 2,056 490 1,373 0 1,863 763 1,292 0 2,055 701 1,264 0 1,965 539 1,419 0 1,958 480 1,292 0 1,772 606 1,238 0 1,844 501 1,177 0 1,678 324 1,271 0 1,595 437 1,214 0 1,651 242 1,219 0 1,461 504 1,199 0 1,703	Thousand Cubic Meters Cu U.S. Mexico Plant* Total Maximum 587 1,469 0 2,056 78.9 490 1,373 0 1,863 73.9 763 1,292 0 2,055 72.6 701 1,264 0 1,965 87.9 539 1,419 0 1,958 69.2 480 1,292 0 1,772 64.9 606 1,238 0 1,844 65.1 501 1,177 0 1,678 56.4 324 1,271 0 1,595 55.8 437 1,214 0 1,651 83.3 242 1,219 0 1,461 52.1 504 1,199 0 1,703 63.5	Thousand Cubic Meters Current Year U.S. Mexico Plant* Total Maximum Minimum 587 1,469 0 2,056 78.9 57.8 490 1,373 0 1,863 73.9 62.6 763 1,292 0 2,055 72.6 61.9 701 1,264 0 1,965 87.9 58.1 539 1,419 0 1,958 69.2 56.9 480 1,292 0 1,772 64.9 55.5 606 1,238 0 1,844 65.1 54.3 501 1,177 0 1,678 56.4 51.9 324 1,271 0 1,595 55.8 51.0 437 1,214 0 1,651 83.3 49.1 242 1,219 0 1,461 52.1 45.1 504 1,199 0 1,703 63.5 49.8	Thousand Cubic Meters Current Year 2001 U.S. Mexico Plant* Total Maximum Minimum Mean S87 1,469 0 2,056 78.9 57.8 66.3 490 1,373 0 1,863 73.9 62.6 66.5 763 1,292 0 2,055 72.6 61.9 66.3 701 1,264 0 1,965 87.9 58.1 65.5 539 1,419 0 1,958 69.2 56.9 63.2 480 1,292 0 1,772 64.9 55.5 59.1 606 1,238 0 1,844 65.1 54.3 59.5 501 1,177 0 1,678 56.4 51.9 54.1 324 1,271 0 1,595 55.8 51.0 53.1 437 1,214 0 1,651 83.3 49.1 53.2 242 1,219 0 1,461 52.1 45.1 48.7 504 1,199 0 1,703 63.5 49.8 54.9	Thousand Cubic Meters Current Year 2001 Period Plant* Total Maximum Minimum Mean Maximum Maximum Mean Maximum Mean M	Thousand Cubic Meters Current Year 2001 Period 1952-200 U.S. Mexico Plant* Total Maximum Minimum Mean Maximum Minimum S87 1,469 0 2,056 78.9 57.8 66.3 93.0 2.5 490 1,373 0 1,863 73.9 62.6 66.5 80.4 2.5 763 1,292 0 2,055 72.6 61.9 66.3 85.7 2.8 701 1,264 0 1,965 87.9 58.1 65.5 87.9 2.6 539 1,419 0 1,958 69.2 56.9 63.2 69.2 2.1 480 1,292 0 1,772 64.9 55.5 59.1 64.9 2.6 606 1,238 0 1,844 65.1 54.3 59.5 68.1 2.6 501 1,177 0 1,678 56.4 51.9 54.1 75.6 2.8 324 1,271 0 1,595 55.8 51.0 53.1 67.9 3.0 437 1,214 0 1,651 83.3 49.1 53.2 87.2 2.6 242 1,219 0 1,461 52.1 45.1 48.7 84.7 3.0 504 1,199 0 1,703 63.5 49.8 54.9 75.9 1.3

^{*} Nogales Wash Pumping Plant